

Attorney Docket: 24720
Serial No.: 10/022,799
Filed: December 20, 2001

REMARKS

Previously, claims 1-28 were pending. Upon entry of this Response, claims 1-17 and 21 are canceled without prejudice to applicant's right to pursue the subject matter in a future related application, and new claims 29-38 are submitted. Thus, claims 18-20 and 22-38 are pending. Claim 18, the only independent claim, has been amended to distinguish the claimed subject matter more clearly. Claims 19-20 and 22-38 depend from claim 18. Support for the claim amendments can be found throughout the specification and in the original claims. No new matter has been introduced with these claim amendments.

In the May 20, 2005 Office Action, the Office has rejected claims 1-28 on various grounds. By canceling claims 1-17 and 21, some of these rejections have been mooted. Accordingly, this Response addresses only those rejections that are still relevant to the pending claims.

Rejection under 35 USC 102(b)

Claims 18-25 were rejected under 35 USC 102(b) as being allegedly anticipated by WO 99/40943. Applicant respectfully traverses this rejection. However, solely to advance prosecution, applicant has amended independent claim 18 as provided herein. Specifically, the amended claim now requires that in the process: a) the drug-substance-surfactant mixture is a clear mixture when the mixture is melted at a temperature above said mixture's melting temperature; and b) that the heated mixture is cooled continuously under high shear.

It is established law that for a reference to be anticipatory, each and every element of the claim must be present in the reference. Applicant contends that the reference does not disclose all the elements of the claim, in particular, the elements of clear-mixture and continuous cooling. Accordingly, applicant respectfully requests that the 35 USC 102(b) rejection be withdrawn.

Rejection under 35 USC 103(a)

Claims 26-28 were rejected as allegedly being rendered obvious under 35 USC 103(a) over the WO 99/40943 reference. Applicant has amended the independent claim 18 as discussed above. For the sake of completeness and ease of discussion, applicant wishes to provide the following arguments in response and takes into account the independent claim 18 as well.

a) Arguments relating to the processing temperature

Claim 18 requires that drug and surfactant be heated to temperatures above the melting temperature of the mixture and that a clear mixture be formed.

Attorney Docket: 24720
Serial No.: 10/022,799
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The reference discloses that the active agent and solubilizer are:

“processed at low temperatures, i.e., at temperatures below the melting points of both, and preferably from below the formation temperature of a eutectic of the active and solubilizer combination to below the temperature at which the active dissolves in the solubilizer.” Page 2, lines 23-26. See also page 3, lines 6-10.

The reference at several instances highlights the **key point** that the temperature shall be below the temperature at which the active dissolves in the solubilizer. The rationale was clearly stated as being: **“so that the drug does not totally dissolve in the eutectic.”** Page 6, lines 23-24.

The reference states that it is important that the drug does not totally dissolve in the eutectic because:

“[w]hen temperatures are too high, one or both of the ingredients can, upon cooling crystallize too quickly, resulting in crystal reformation which are too large to take advantage of the wetting properties of solubilizer/eutectic.” Page 6, lines 23-25.

“... process the combination at a temperature sufficiently low such that the active does not dissolve in the solubilizer. It is believed that if too much of the active ingredient dissolves in the eutectic, upon cooling the active will form crystals which will be so large that they cannot benefit from the wetting effects of the solubilizer and therefore, not dissolve as readily.” Page 5, lines 27-31.

“If the blend of ingredients is heated too far above the point at which the eutectic alloy forms, however, it is believed that crystals of the active ingredient dissolve in the solubilizer, or melt, resulting in a saturated or even a super saturated solution. Upon cooling the dissolved or melted active will then re-crystallize into crystals which are too large to benefit from the improved wetting of the solubilizer/eutectic coating and not dissolve as readily.” Page 4, lines 11-16.

The reference discloses further that temperature control is important not only in the actual solubilization process but also in auxiliary optional processes such as milling:

“If milling or other particle size reduction methods are utilized care must be taken to insure that the temperatures created do not raise much above the original processing temperature or again, large crystals of active may form in the eutectic.” Page 4, lines 27-29.

Applicant submits that the claim 18 as amended requires that a “clear mixture” of the drug and the solubilizer be formed. This is contrasted with the disclosure of the cited

Attorney Docket: 24720
Serial No.: 10/022,799
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reference which teaches that the drug shall not be dissolved in the solubilizer/eutectic. Therefore, the reference actually teaches away from the claimed invention.

b) Arguments relating to continuous cooling:

Claim 18 as amended requires that the melted mixture be cooled continuously under high shear forces. There is no such teaching in the cited reference. The Office has pointed out that the reference indicates using shear forces. However, applicant contends that the reference mentions shear forces with respect to making the eutectic mixture, and that too in the presence of temperatures that are conducive to forming a eutectic mixture. See for example:

“The processing further involves combining of ingredients at the above stated processing temperatures **in the presence** of forces sufficient to produce a active/solubilizer eutectic” Page 2, lines 26-28. (emphasis added).

“Applicant has found that certain actives ... when processed under sufficient forces (such as shear forces, centrifugal forces or pressure) **and** at temperatures from below the formation temperature of the eutectic to below the temperature at which the active dissolves in the solubilizer, or melts. These eutectics, while in the presence of the temperature and force, will coat or envelop

The above disclosure should be contrasted with the applicant's invention which requires that continuous cooling be employed under high shear.

Applicant respectfully submits that the reference teaches away from the claimed invention and contends that the 35 USC 103(a) rejection be withdrawn.

Rejection under 35 USC 112

Claims 1-17 were rejected as allegedly being indefinite under 35 USC 112. In view of the cancellation of these claims, applicant contends that this rejection has been mooted.

CONCLUSION

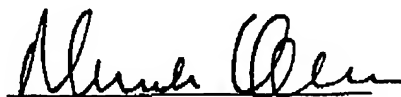
Attorney Docket: 24720
Serial No.: 10/022,799
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Applicant respectfully submits that the pending amended and new claims, claims 18-20 and 22-39, are in condition for allowance and requests that these claims be allowed.

If a telephone or in-person meeting will facilitate advancing of this prosecution, applicant requests that the Office contact the undersigned attorney at the earliest convenience.

Respectfully submitted:

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